Correspondence

Prevalence of lymphoid follicles in *Helicobacter pylori* associated gastritis

We read with great interest the paper by Zaitoun¹ which addressed the detection of lymphoid follicles in *Helicobacter pylori* associated gastritis. Given several points raised by the author, we would briefly like to mention our personal experience of the histological detection of primary and secondary lymphoid aggregates in *H pylori* associated gastritis, including some general comments on mucosal sampling in *H pylori* associated gastric disease.

In an ongoing prospective study, we are evaluating the possibility of increasing the sensitivity of histological characterisation of gastritis by routinely taking samples of the incisura angularis along the lesser curvature in addition to biopsy specimens from the antral and oxyntic mucosa.

In our opinion, in the assessment of *H pylori* infection, the high positive predictive value shown by lymphoid follicles could be regarded as redundant information, as both the bacterium and the follicles clearly coexist within the same biopsy sample. Actually, it would have been more exciting to ascertain, in the absence of histologically detectable *H pylori*, whether the presence of lymphoid follicles could successfully identify patients in whom *H pylori* infection could be confirmed by technical procedures other than histology—for example, PCR and culture.

However, the study by Dr Zaitoun, in which follicles were mainly found in the antral mucosa, provides useful information and enabled us to speculate which site would be the most appropriate for sampling: (1) to achieve accurate staging of *H pylori* associated inflammatory lesions; and (2) to have the greatest chance of detecting mucosa associated lymphoid tissue (MALT) derived primary gastric lymphomas at an early stage.

Consecutive patients (n = 181) with non-ulcer dyspepsia (94 *H pylori* positive and 87 *H pylori* negative) underwent gastric endoscopy. Biopsy specimens, two from each site, were taken from the antral and oxyntic mucosa, and the incisura angularis. Table 1 shows the significant association between the presence of lymphoid follicles in non-oxyntic gastric mucosa and *H pylori* infection and also highlights the higher incidence of lymphoid follicles in samples of the incisura angularis.

These data confirm that (1) lymphoid follicles are part of the histological spectrum of *H pylori* associated gastritis^{2,3}; (2) are more characteristic of mucosa of the incisura angularis than of the antrum (p < 0.000); and (3)

indicate that the incisura angularis is the site of choice for sampling for the early detection of primary gastric lymphomas, which arise more frequently in lymphoid tissue acquired as a result of a pre-existing disorder and characteristically tend to remain restricted to their site of origin.⁴

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- 1 Zaitoun AM. The prevalence of lymphoid follicles in *Helicobacter pylori* associated gastritis in patients with ulcer and non-ulcer dyspepsia. *J Clin Pathol* 1995;48:325-9.
- 2 Genta RM, Hamner HW, Graham DY. Gastric lymphoid follicles in *Helicobacter pylori* infection: Frequency distribution and response to triple therapy. *Hum Pathol* 1993;24:577-83.
- 3 Eidt S, Stolte M. Prevalence of lymphoid follicles and aggregates in *Helicobacter pylori* gastritis in antral and body mucosa. *J Clin Pathol* 1993;46:832-5.
- 4 Isaacson PJ, Spencer J. The biology of low grade MALT lymphomas. *J Clin Pathol* 1995;48:395-7.

Dr Zaitoun comments:

The observations by Dr Rugge and his colleagues confirm previous studies^{1,2} that lymphoid follicles are a constant histological feature of *H pylori* associated gastritis. I have used the Sydney system to classify and grade gastritis in a previous study.³ In Rugge's study, however, two additional biopsy specimens were taken from the incisura angularis along the lesser curvature. Their initial findings appear to agree with previous studies^{1,2,4} that lymphoid follicles are more numerous in the antrum than in the corpus in *H pylori* associated gastritis. Rugge's data also suggest a higher prevalence of lymphoid follicles in the incisura angularis than the antrum or the corpus. This is not a surprising or new finding as Genta *et al*² have demonstrated that lymphoid follicles were more numerous on the antral lesser curvature than on either the antral greater curvature or corpus and there was an almost linear progression in the number of follicles from proximal to distal lesser curvature. In all previous studies including my own^{1,2,4}, the prevalence of lymphoid follicles was strongly correlated with the degree of inflammation and the activity and severity of gastritis. My study¹ has provided further evidence that lymphoid follicles are strongly correlated with the degree of inflammation as lymphoid follicles were found in the corpus in all cases of pangastritis, but predominantly corporal. Rugge *et al*, however, do not provide information about the grades of activity, inflammation and *H pylori* in all sites studied.

The study by Genta *et al*² and the observations of Rugge and his colleagues suggest that the lesser curvature and incisura angularis represent a common site for detecting lymphoid follicles in *H pylori* associated gastritis from patients with ulcer and non-ulcer dyspepsia. One possible explanation for this is the higher density of lymphatic vessel plexus (primary site for lymphoid follicle formation) in the lesser curvature in comparison with other sites of the stomach. This is a matter for further investigation.

Rugge's data show that the incidence of *H pylori* associated gastritis is 52% in patients with non-ulcer dyspepsia. This figure is lower than those reported by other authors^{3,5,6} who recorded incidences of 78%, 70% and 87% in similar clinical conditions. Rugge's data also confirm those reported by the author¹ that lymphoid follicles are seen in *H pylori* negative gastritis defined by histological criteria. Further studies are needed, including serological investigations, to confirm/exclude previous infection by *H pylori*⁷ in patients with *H pylori* negative gastritis.

Rugge's letter also addresses the issue of MALT derived gastric lymphoma and *H pylori* infection. It is known that the incidence of MALT derived primary gastric lymphoma is higher in the lower part of the stomach than the upper part and this parallels the prevalence of *H pylori* infection and the formation of lymphoid follicles in *H pylori* associated gastritis. The similarities in the epidemiology between *H pylori* infection, the formation of lymphoid follicles and that of MALT derived gastric lymphoma necessitate further studies to look at the incidence of MALT derived gastric lymphoma in specific sites in the antrum and the corpus, as Rugge's observations imply.

- 1 Zaitoun AM. The prevalence of lymphoid follicles in *Helicobacter pylori* associated gastritis in patients with ulcer and non-ulcer dyspepsia. *J Clin Pathol* 1995;48:325-9.
- 2 Genta RM, Hamner HW, Graham DY. Gastric lymphoid follicles in *Helicobacter pylori* infection: Frequency, distribution and response to triple therapy. *Hum Pathol* 1993;24:577-83.
- 3 Zaitoun AM. Histological study of chronic gastritis from the United Arab Emirates using the Sydney system of classification. *J Clin Pathol* 1994;47:810-15.
- 4 Eidt S, Stolte M. Prevalence of lymphoid follicles and aggregates in *Helicobacter pylori* gastritis in antral and body mucosa. *J Clin Pathol* 1993;46:832-5.
- 5 Rauws EAJ, Langenberg W, Houthoff HJ, Zanen HC, Tytgat GNJ. Campylobacter pylorides-associated chronic active antral gastritis. *Gastroenterology* 1988;94:33-40.
- 6 Loffeld RJLF, Stobberingh E, Flendrig JA, Arends JW. Presence of *Helicobacter pylori* in patients with nonulcer dyspepsia revealing normal antral histological characteristics. *Digestion* 1990;47:29-34.
- 7 Karnes WEJ, Samloff IM, Siurala M, Kekki M, Sipponen P, Kim SWR, *et al*. Positive serum antibody and negative tissue staining for *Helicobacter pylori* in subjects with atrophic body gastritis. *Gastroenterology* 1991;101:167-74.

Book reviews

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Diagnostic Immunopathology. Eds Colvin RB, Bhan AK, McCluskey RT. 2nd edn. (Pp 892; \$296.50.) Raven Press. 1994. ISBN 0-7817-0020-5.

This book has 61 contributing authors, many of them distinguished in their fields of expertise. There are five chapters on immunopathology.

Table 1 Detection of lymphoid follicles in antral, angular and oxyntic mucosa in histologically confirmed *H pylori* positive and negative gastritis

	Sample type		
	Antral	Angular	Oxyntic
<i>H pylori</i> positive gastritis	47 (25%)	67 (37%)	8 (4%)
<i>H pylori</i> negative gastritis	11 (7%)	14 (8%)	4 (2%)
Total	58 (32%)	81 (45%)	11 (6%)

logical mechanisms, eight on immunopathological diseases, five on immunodeficiency diseases, seven on transplantation, 11 on the immunohistochemistry of neoplasms, and five on techniques. Many chapters have several hundred references, making the whole text a mine of information. The downside of so many contributing authors is that there is considerable repetition of information throughout the book and a lack of uniformity in the chapters. This is demonstrated by the illustrations. For example, the chapter on immunohistochemistry of skin tumours is entirely illustrated in colour, whereas the chapter on soft tissue tumours has only black and white photographs. The text is relatively under-illustrated for a book of this nature and colour illustrations are mainly restricted to a small format. Black and white photographs are of variable quality, some being uninterpretable. If this book is to run to a third edition, the editors and publishers need to address this problem and to ensure greater uniformity in the quality and style of illustrations.

The preface to the first edition states, "The primary purpose of this volume is to provide a practical and critical guide to the performance and interpretation of current immunologic tests performed in diagnostic pathology laboratories". It is stated that the book "will be of interest to practicing pathologists, clinical immunologists and other physicians with an interest in immunologic diseases and techniques". *Diagnostic Immunopathology* is certainly not a bench book and many pathologists will prefer smaller texts in their special area of interest which are more easily kept up-to-date than large, multi-authored tomes. Nevertheless, the second edition of this book appears to have achieved the objectives set out in the preface to the first edition. It would be a valuable reference source in any large pathology department or library.

E BENJAMIN

Haematological Oncology. Eds Armitage J, Newland A, Keating A, Burnett A. (Pp 264; £55.00.) Vol 4 in the series **Cambridge Medical Reviews**. Cambridge University Press. 1995. ISBN 0-521-46169.

A quotation from Dr Robert E Scully might serve to introduce our thoughts on this book. "... a pathologist unaware of the therapeutic implications of his (her) diagnosis can serve the patient no better than a clinician who fails to comprehend the meaning of a pathological report." A modern pathological report on the tissue diagnosis of a haematological malignancy is likely to read like a telegram, with numerous abbreviations referring to diverse antigens, and antibodies detecting them. Also likely are the mention of some other sophisticated techniques to indicate whether or not this is associated with a virus. The range and scope of haematological malignancies are far more numerous and complicated than the number of recipes to treat them, invoking comments from oncologists that immunomorphological classifications produce too many compartments, and therefore lack clinical relevance. The reviews, written by an assemblage of experts from all over the globe, and across all disciplines of medical science, almost deliver what the Cambridge University Press promises—that is, dissemination of new information to any one past the undergraduate medical curriculum. The coverage is selective, in solid tumours of lymphoid origin, such as anaplastic large cell lymphomas, both de novo and HIV associated; MALT associated lymphomas; splenic lymphoma with villous lympho-

cytes and its distinction from hairy cell leukaemia. The account of EBV in Hodgkin's disease is a state of the art review considering the speed of accumulation of information on the subject. The analysis of clinical use of growth factors is interesting to the uninitiated. There is a brief but practical chapter on the phenotype of leukaemias and lymphomas compiled by authors whose names are missing in the list of references. That leaves but only a few reviews not worth reading. Digestion of the information will depend on the acquired degree of lymphomania. A few experts may actually buy this volume, should their minds wander in search of details, even of a familiar entity.

G DELSOL
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Pathology Update. Volume 2. Endocrine Pathology. Eds Costa J, Nesland JM. (Pp 100; DM 58; Sw Fr 56.) Gustav Fischer Verlag. 1995. ISBN 3-437-11681-9.

This is the second volume in a new educational series from the European Society of Pathology. I understand that the series is intended to present state of the art reviews from topics presented at Euro Cell Path and the European School of Pathology Conferences. The publishers claim that "the Journal will be a valuable resource in a rapidly growing pathology world and will be the most important treasure for you to keep in front line for implementation of basic sciences in routine pathology".

The volume commences with a pertinent introduction from Fatima Carneiro and Manuel Sobrinho-Simões. This introduces the peculiarities of endocrine tumours and the difficulties in distinguishing between hyperplasias and neoplasias, and within neoplasias, between benign and malignant entities. It then goes on to state the rationale for choosing the individual review articles. The nine review articles which then follow have an about equal split between reviews of research based techniques such as cytometric DNA analysis, cytogenetics and molecular genetics on the one hand and straightforward description of diagnostic features on the other. The review articles are up to date, reasonably well written and extensively referenced. Where included, the illustrations are of good quality. The quality of the English translations is variable with a few examples of problems serious enough to cause difficulty in comprehension. For me, the high points of this volume are the article by Soares and Sobrinho-Simões "Recent Advances in Cytometry, Cytogenetics and Molecular Genetics of Thyroid Tumours and Tumour-like Lesions", which gives a good review of current molecular biological work and the article by Fonseca and Sobrinho-Simões on "Diagnostic Problems in Differentiated Carcinomas of the Thyroid", which gives a closely worked detailed description of points in differential diagnosis.

Although there are many contenders in the market for good review articles such as *Recent Advances in Histopathology*, *Current Topics in Pathology*, *Pathology Annual*, and *Progress in Pathology*, there clearly is a demand for good quality recent review articles summarising recent findings in an era of constant proliferation of information all of which cannot be read by a medical practitioner at first hand. The question then arises—does this contribute anything extra by virtue of scope or quality compared with the other series of review articles available? I considered the articles in

this volume worth reading, but that the volume had no particular competitive advantage compared with the other series which exist.

T STEPHENSON

Self-Assessment Colour Review of Clinical Haematology. Mehta AB. (Pp 150; £14.95.) Manson Publishing. 1995. ISBN 1-874545-22-7.

This is an addictive book and should carry a health warning. It is a slim, pocket-sized volume (white-coat pockets only!) consisting of 72 brief case presentations illustrated with blood and marrow films, histological sections, x ray films and scans, electrophoretic strips, and laboratory results, all with self-testing quizzes and answers. Each case (with its quiz) is presented on one page and answered (with a full discussion) overleaf. The range of cases is admirable, covering every important aspect of haematology. I found the book impossible to put down.

The limitations of printing very small illustrations are evident—details of smears or scans may be missed, or conversely features like spherocytosis or thrombocytopenia may appear to be present when they are not. Let yourself off—it wasn't your fault you missed the diagnosis, it was the printer's.

Anyone who has just passed the MRCP exam in haematology should enjoy working through the book, get about 75% of the answers right, and complete the task in two or three hours. As a teaching aid for haematology trainees, it is invaluable. I wouldn't, however, recommend it for trainees in general medicine, less still for any medical student who hasn't already resolved to become a top haematologist.

For the next edition, a number of measurement units need to be corrected, and some eponymous names—Laurell and that long-suffering victim R R A Coomb's among them need justice done to them. It certainly won't be long before the next edition is needed.

N SLATER

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